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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,249

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Martin Evans

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EXAMINER

BOYER, RANDY

ART UNIT

PAPER NUMBER

1764

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/27/2006

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/717,249

Applicant(s)

EVANS, MARTIN

Examiner

Randy Boyer

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☒ Claim(s) 9,21,22,25-27 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2 April 2004, 22 July 2004, 3 April 2006, and 4 December 2006.

## DETAILED ACTION

### *Claim Objections*

1. Claim 9 is objected to for improper use of the English language. Claim 9 as submitted reads "The system of claim 1 further comprising: a pressure control system coupled to the platform and the catalyst reservoir for controlling pressure *with in* the catalyst reservoir" (emphasis added). Examiner suggests modification of the claim language to read "The system of claim 1 further comprising: a pressure control system coupled to the platform and the catalyst reservoir for controlling pressure within the catalyst reservoir." Appropriate correction is required.

2. Claims 26, 27, and 31 are objected to for inconsistent use of claim terminology. Claim 26 recites the limitations "hard piped catalytic injection systems" and "mobile catalyst injection." Claim 27, which depends from claim 26, recites the limitation "mobile catalyst injection *system*" while claim 31 (also dependent from claim 26) recites only "injection system." All of these claims refer to two distinct injection systems, i.e. (1) a "hard piped catalytic injection system," and (2) a "mobile catalyst injection system."

To alleviate the risk of confusion and provide consistency in claim language, Examiner suggests amending claims 26 and 31 to read "mobile catalyst injection system" which is consistent with the limitation recited in claim 27.

3. Claims 21, 22, and 25 are objected to for lack of antecedent basis.

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4. With respect to claim 21, the claim recites the limitation "the platform." There is insufficient antecedent basis for this limitation in the claim.

Examiner takes the position that Applicant intended "platform" to read "trailer" as in independent claim 18. Consequently, claim 21 is presently examined with the limitation "a second catalyst reservoir coupled to the trailer and pressure control system."

5. With respect to claim 22, the recites the limitation "the trailer" in line 5 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Examiner takes the position that Applicant intended "trailer" to read "container" as in line 2 of the claim. Consequently, claims 22-25 are presently examined with the limitation "a pressure control system coupled to the container and catalyst reservoir."

6. With respect to claim 25, the claim recites the limitation "the platform." There is insufficient antecedent basis for this limitation in the claim.

Examiner takes the position that Applicant intended "platform" to read "container" as in line 2 of independent claim 22. Consequently, claim 25 is presently examined with the limitation "a second catalyst reservoir coupled to the container and pressure control system."

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4, 9, 18, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Andon (US 4082513).

9. With respect to claim 1, Andon discloses a mobile catalyst injection system comprising: a transportable platform (column 2, lines 11-12), a catalyst reservoir coupled to the platform (10) and adapted to be coupled to a fluid catalyst cracking unit (14), and a flow control device coupled to an outlet of the reservoir (15) and adapted to control the flow of catalyst through the outlet port.

10. With respect to claim 2, Andon discloses wherein the platform is a trailer (column 2, lines 11-12).

11. With respect to claim 3, Andon discloses wherein the platform is a container (column 2, lines 11-12).

12. With respect to claim 4, Andon discloses wherein the platform is a railroad car (column 2, lines 11-12).

13. With respect to claim 9, Andon discloses a pressure control system (column 2, lines 51-56) coupled to the platform (column 2, lines 11-12) and the catalyst reservoir (10) for controlling pressure within the catalyst reservoir.

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14. With respect to claim 18, Andon discloses a mobile catalyst injection system comprising: a trailer (column 2, lines 11-12), a catalyst reservoir coupled to the trailer (10) and adapted to be coupled to a fluid catalyst cracking unit (14), a pressure control system coupled to the trailer and catalyst reservoir (column 2, lines 42-61), a generator coupled to the pressure control system, and a flow control device coupled to an outlet of the reservoir (15) and adapted to control the flow of catalyst through the outlet port.

Note that while Andon does not explicitly disclose “a generator coupled to the pressure control system,” such limitation is inherently disclosed since the person having ordinary skill in the art would recognize that in order to provide the automatic pressure control for the system there must necessarily be “a generator” or other source of electricity to drive the valves.

15. With respect to claim 22, Andon discloses a mobile catalyst injection system comprising: a container (column 2, lines 11-12), a catalyst reservoir coupled to the container (10) and adapted to be coupled to a fluid catalyst cracking unit (14), a pressure control system coupled to the container and catalyst reservoir (column 2, lines 42-61), a generator coupled to the pressure control system (inherent disclosure, see discussion *supra* at paragraph 15), and a flow control device coupled to an outlet of the reservoir (15) and adapted to control the flow of catalyst through the outlet port.

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andon (US 4082513).



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20. With respect to claim 5, Andon discloses a mobile catalyst injection system comprising: a transportable platform (column 2, lines 11-12), a catalyst reservoir coupled to the platform (10) and adapted to be coupled to a fluid catalyst cracking unit (14), and a flow control device coupled to an outlet of the reservoir (15) and adapted to control the flow of catalyst through the outlet port.

Andon does not disclose wherein the platform is a pallet.

However, a pallet is known in the art to be a substitute means for transporting material.

Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to use a pallet as a "transportable platform" in a mobile catalyst injection system.

21. With respect to claim 6, a barge is known in the art to be a substitute means for transporting material.

22. Claims 7, 8, 10-12, 17, and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson (US 4769127).

23. With respect to claim 7, Erickson discloses a mobile catalyst injection system comprising: a transportable platform (56), a catalyst reservoir coupled to the platform (400); a flow control device coupled to an outlet of the reservoir (64) and adapted to control the flow of catalyst through the outlet port, and a generator coupled to the platform (column 5, lines 62-68, and column 6, lines 1-2).

Erickson does not disclose wherein the catalyst reservoir is adapted to be coupled to a fluid catalyst cracking unit.

However, Erickson discloses that the system can be included as part of a reaction process that refines a petroleum feedstock in the presence of a fresh catalyst (column 3, lines 31-34).

Therefore, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to include the system of Erickson as part of a process to feed fresh catalyst to a fluid catalyst cracking unit.

24. With respect to claim 8, Erickson discloses a controller coupled to the platform and flow control device for controlling the catalyst dispensed from the catalyst reservoir (column 20, lines 56-68, and column 21, lines 1-9).

25. With respect to claim 10, Erickson discloses wherein the catalyst reservoir is movable relative to the platform (column 6, lines 7-9).

26. With respect to claims 11 and 12, Erickson discloses a plurality of load cells disposed between the catalyst reservoir and platform, as well as a sensor adapted to detect a metric indicative of catalyst dispensed from the catalyst reservoir (column 5, lines 46-56).

27. With respect to claim 17, Erickson discloses a mobile catalyst injection system further comprising a second catalyst reservoir coupled to the platform and adapted to be coupled to the fluid catalyst cracking unit (66).

28. With respect to claim 26, Erickson discloses a method for process control in a resid hydrotreating unit comprising: processing oil in a treating system having one or more hard piped catalytic injection systems, transporting a mobile catalyst injection to

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the treating system, coupling the mobile catalyst injection to the treating system, and injecting catalyst from the mobile catalyst injection into the treating system (Figure 3).

Erickson does not disclose use of such a method for process control in a fluid catalytic cracking system.

However, Erickson discloses that his process can be carried out with many types of equipment, including as part of a reactor system that refines a petroleum feedstock in the presence of a fresh catalyst (column 3, lines 31-34).

Therefore, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to integrate the process of Erickson into a fluid catalytic cracking system to provide an improved means of catalyst handling.

29. With respect to claim 27, Erickson discloses transporting a mobile catalyst injection by way of rail or truck (column 2, 36-39).

30. With respect to claims 28-30, Erickson discloses the electronic sensing and monitoring of the type and amount of catalyst being dispensed into the treating system (column 2, lines 31-35).

31. Claims 13-16, 31, 32, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson (US 4769127) in view of Haugen (US 2616591).

32. With respect to claim 13, Erickson discloses a mobile catalyst injection system comprising: a transportable platform (56), a catalyst reservoir coupled to the platform (400), and a flow control device coupled to an outlet of the reservoir (64) and adapted to control the flow of catalyst through the outlet port.

Erickson does not disclose wherein the catalyst reservoir further comprises a

plurality of compartments and a plenum disposed in the catalyst reservoir coupling the compartments.

However, Haugen discloses a dispensing device comprising a plurality of compartments (12, 13) and a plenum (17) disposed in the device and coupling the compartments. Haugen explains that the plurality of measuring devices (i.e. compartments) of his invention provides for a substantial time savings of delivering material by eliminating the need for separate measuring devices for separate ingredients.

Therefore, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to modify the system of Erickson to provide for use of a single catalyst reservoir having multiple compartments, so as to eliminate the need for two catalyst reservoirs to deliver two types of catalyst.

33. With respect to claims 14, Haugen provides a dispensing device having two compartments substantially equal in volume (see Haugen, Figures 1 and 5).

34. With respect to claims 15, 16, and 32 Haugen does not contemplate the use of compartments of different sizes. However, the court has held that where the only difference between the prior art and the claims at issue is a recitation of relative dimensions of the claimed device, and a device having the claimed relative dimensions would not perform differently than the prior art device, then the claimed device is not patentably distinct from the prior art device. See *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984).

35. With respect to claim 31, Haugen discloses storing material in a first compartment of a dispensing device and storing material in a second compartment of a dispensing device (see Haugen, Figures 1 and 5).

36. With respect to claim 34, Haugen discloses dispensing material simultaneously from two different compartments (see Haugen, column 1, lines 19-21).

37. With respect to claim 35, it has been held that the selection of any order of mixing ingredients is *prima facie* obvious. See *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930).

38. Claims 19-21, 23-25, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andon (US 4082513) in view of Haugen (US 2616591).

39. With respect to claim 19, Andon discloses a mobile catalyst injection system comprising: a trailer (column 2, lines 11-12), a catalyst reservoir coupled to the trailer (10) and adapted to be coupled to a fluid catalyst cracking unit (14), a pressure control system coupled to the trailer and catalyst reservoir (column 2, lines 42-61), a generator coupled to the pressure control system (inherent disclosure, see discussion *supra* at paragraph 15), and a flow control device coupled to an outlet of the reservoir (15) and adapted to control the flow of catalyst through the outlet port.

Andon does not disclose a plurality of compartments and a plenum disposed in the catalyst reservoir and coupling the compartments.

However, Haugen discloses a dispensing device comprising a plurality of compartments (12, 13) and a plenum (17) disposed in the device and coupling the compartments. Haugen explains that the plurality of measuring devices (i.e.

compartments) of his invention provides for a substantial time savings of delivering material by eliminating the need for separate measuring devices for separate ingredients.

Therefore, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to modify the system of Andon to provide for use of a single catalyst reservoir having multiple compartments, so as to eliminate the need for two catalyst reservoirs to deliver two types of catalyst.

40. With respect to claims 20 and 24, Haugen does not contemplate the use of compartments of different sizes. However, the court has held that where the only difference between the prior art and the claims at issue is a recitation of relative dimensions of the claimed device, and a device having the claimed relative dimensions would not perform differently than the prior art device, then the claimed device is not patentably distinct from the prior art device. *See Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984).

41. With respect to claims 21 and 25, a mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *See In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

42. With respect to claim 23, Haugen discloses a dispensing device having a plurality of compartments and a plenum disposed in the device and coupling the compartments (see Haugen, Figures 1 and 5).

43. With respect to claim 33, Andon discloses pressurizing the catalyst reservoir (see Andon, column 2, lines 53-56).

### ***Conclusion***

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy Boyer whose telephone number is (571) 272-7113. The examiner can normally be reached Monday through Friday from 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola, can be reached at (571) 272-1444. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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RPB

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